US Army Corps of Engineers
HUNTSVILLE ENGINEERING AND SUPPORT CENTER

Defense Environmental Restoration Program
for
Formerly Used Defense Sites
Ordnance and Explosives

ARCHIVES SEARCH REPORT

CONCLUSIONS AND RECOMMENDATIONS

Chatham Naval Air Station

Chatham, Mass

Project Number - D01MA045901

SEPTEMBER 1997 (FINAL)

Prepared by
US ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT

DEPARTMENT OF THE ARMY
HUNTSVILLE CENTER, CORPS OF ENGINEERS
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HUNTSVILLE, ALABAMA 35807-4301

REPLY TO
ATTENTION OF:

CEHNC-OE-DC (200-1c) 24 November 1997

MEMORANDUM FOR Commander, U.S. Army Engineer Division,
North Atlantic, ATTN: CENAD-PP-S
90 Church Street, New York, NY 10007-2979

SUBJECT: Performance of Archives Search at Defense Environmental Restoration Program-Formerly Used Defense Site (DERP-FUDS), Project No. D01MA045901 Chatham Naval Air Station (NAS)

1. A DERP-FUDS Inventory Project Report (INPR) was prepared for subject project. A review of the INPR indicated that the site may have potential Ordnance and Explosives (OE) presence resulting from the land being used as a naval air station.

2. An Archives Search Report was completed in September 1997. The mission of Chatham NAS was protecting shipping, in the area around Cape Cod, from enemy submarines and ships using patrolling seaplanes, flying boats, and dirigibles. The OE related features of the Chatham NAS included the storage and off-site use of small arms, large caliber ammunition, and Clark Mark IV bombs. There has been no indication of OE hazards from the Navy's use of Chatham NAS.

3. The archives search, site visit (performed on 26 August 1997), and interviews have resulted in the conclusion that this site has no evidence of any chemical warfare material (CWM) or conventional OE. The site received a Risk Assessment Code score of 5.

4. Based on the above, we recommend no further action regarding OE/CWM. We will update the FUDS database to reflect this recommendation and remove subject project from the FUDS workplan. The geographic district should retain a copy of this memorandum to satisfy the administrative record requirements of the National Contingency Plan.

CEHNC-OE-DC (200-1c) 24 November 1997
SUBJECT: Performance of Archives Search at Defense Environmental Restoration Program-Formerly Used Defense Site (DERP-FUDS), Project No. D01MA045901 Chatham Naval Air Station

5. If you have any questions concerning this action, please call me at 205-895-1797, DSN 760-1797 or facsimile 205-895-1798.

FOR THE DIRECTOR OF ORDNANCE
AND EXPLOSIVES TEAM:

DANNY R. MARDIS
Archives Search Report Manager
for Ordnance and Explosives Team

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Prepared by the:

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The following individuals comprised the archive search team:

Name	Phone Number	CEMVS-	Position
Kenny Brimm	314-331-8797	ED-P	Historian
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Michael (Mike) Dace	314-331-8036	ED-P	Chief of Ordnance and Technical Service Branch
Gary Dyhouse	314-331-8362	ED-HE	Hydrology & Climate
Shirley Hamilton	314-331-8848	ED-P	Project Assistant
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Lynn Neher	314-331-8880	PD-A	Biologist
George Sloan, III	314-331-8796	ED-P	Safety Specialist
Shelia Thomas	314-331-8793	ED-P	Historian
Rick Webster	314-331-8639	ED-HG	Aerial Photography Interpretation

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1.0 INTRODUCTION

1.1 AUTHORITY

In 1986, Congress established the Defense Environmental Restoration Program (DERP) at 10 United State Code (USC) 2701 et seq. This program directed the Secretary of Defense to "carry out a program of environmental restoration at facilities under the jurisdiction of the Secretary."

In March, 1990, the Environmental Protection Agency (EPA) issued a revised National Contingency Plan (NCP). Under 40 Code of Federal Regulations (CFR) 300.120, EPA designated the Department of Defense (DoD) to be the removal response authority for incidents involving DoD military weapons and munitions under the jurisdiction, custody and control of DoD.

Since the beginning of this program, the U.S. Army Corps of Engineers has been the agency responsible for environmental restoration at Formerly Used Defense Sites (FUDS). Since 1990, the U.S. Army Engineering and Support Center, Huntsville (CEHNC) has been the Mandatory Center of Expertise (MCX) and Design Center for Ordnance and Explosives.

1.2 SUBJECT

Chatham Naval Air Station (NAS) consisted of approximately 55.52 acres near Chatham, Massachusetts located in Barnstable County. Construction on the station began in August 1917 and it officially opened the following January. Chatham NAS's mission was protecting shipping in the area around Cape Cod from enemy submarines and ships using patrolling seaplanes, flying boats and dirigibles. Chatham NAS closed in 1923 and remained in caretaker status for over 15 years. Between 1938 and 1940, the U.S. Naval Communication Reserve used one of the few remaining buildings and apparently, the property remained idle throughout World War II. The Navy declared the Chatham NAS surplus by 7 May 1946. The ordnance and explosives related features of the facility included the storage and off-site use of: small arms, large caliber ammunition and Clark Mark IV bombs. Plate 1 in the report plates section shows the general location of the site.

1.3 PURPOSE

The Archives Search Report (ASR) compiles information obtained through historical research at various archives and records holding facilities, interviews with persons associated with Chatham NAS or its operations and a team inspection of the site. The search directs efforts towards determining possible use or disposal of ordnance and explosives (OE) and chemical warfare materials (CWM) on the site. The research places particular emphasis on establishing the types, quantities and area of disposal. This process obtains information for use in developing recommendations for further action at the former Chatham NAS.

1.4 SCOPE

This investigation focuses on potential OE and/or CWM contamination remaining on the former Chatham NAS. The DERP-FUDS project number is D01MA045901. This report presents the following:

- A brief history of Chatham NAS
- Description and characteristics of the immediate surrounding area
- A review of related site investigations
- An aerial photography and map analysis of the site
- Real estate information, past and present
- Findings of the site inspection
- Description of the OE and/or CWM identified with the site

These factors represent the basis for the evaluation of potential OE and CWM contamination and associated risks at Chatham NAS.

2.0 CONCLUSIONS

2.1 SUMMARY OF CONCLUSIONS

2.1.1 Conventional Ordnance

The archive search located evidence confirming that the Navy used **Chatham Naval Air Station** for as a base for patrolling the area around Cape Cod using seaplanes, flying boats and dirigibles. The types of conventional ordnance identified with the site included small arms, large caliber ammunition and Clark Mark IV bombs. The Navy stored these ordnance items at Chatham Naval Air Station to use in the event of spotting of enemy submarines and ships while on patrol.

The archive search found no indication of a current ordnance and explosive hazard from the Navy's use of Chatham Naval Air Station. Researchers discovered no historical records indicating ordnance disposal on site. Interviews did not disclose any incidents of ordnance or explosive hazards found in the past. Aerial photography analysis did not locate any distinct signs of on-site burial. Additionally, the site inspection did not discover any OE debris.

No identifiable remediation project exists concerning conventional OE at Chatham Naval Air Station. The ASR concludes no further action required for this portion of the project.

2.1.2 Chemical Warfare Materials

The archive search uncovered no evidence that chemical warfare training occurred or that the Navy stored, used or disposed of chemical warfare materials at Chatham Naval Air Station. No identifiable remediation project exists concerning CWM at Chatham Naval Air Station. The ASR concludes no further action required for this portion of the project.

2.2 HISTORICAL SITE SUMMARY

Construction of the **Chatham Naval Air Station**[1] (NAS) began on 29 August 1917, with funds approved by the Urgent Deficiency Act on 15 June 1917. The station officially opened the following January, with some of the support facilities still under construction. Chatham's mission was to protect shipping in the area from enemy submarines and ships. During World War I, seaplanes, flying boats and dirigibles from Chatham NAS patrolled the waters near Cape Cod. Chatham aviators saw action at least once during a German U-boat attack.

Flying operations at Chatham ceased when the First Naval District placed it in a non-operational status on 15 May 1920. The U.S. Navy Bureau of Aeronautics ordered facility personnel to remove the base's "material" and close it by 30 June 1922. The final closure

[1] The Navy also referreed to the site as **Coastal Air Station, Chatham Mass., Naval Air Station-1** and as naval installation number 917.

occurred on 22 January 1923 (U.S. Navy, First Naval District 1921a; U.S. Navy First Naval Reserve 1922; U.S. Navy, First Naval District 1923a).

The facility went into a caretaker status on 2 February 1923, it remained that way for over 15 years. Attempts by the Navy to lease the facility to private interests proved fruitless, though occasional use by an air ship company or others occurred. On 20 October 1927, the Navy sold all the buildings except for three hangars, the security gate house (caretaker's quarters) and magazine.

On 7 October 1938, the Navy transferred the property to the Bureau of Navigation, which used the caretaker's building as a headquarters to the U.S. Naval Communication Reserve (NCR). At that same time, the Navy sold all the remaining buildings except the headquarters and magazine. The NCR continued to use the headquarters building until 1940. Presumably, the establishment of the U.S. Naval Radio Station, Chatham approximately 1 mile away rendered this use obsolete. Apparently, the Chatham NAS property remained idle throughout World War II.

The Navy declared the Chatham NAS surplus and transferred it to the War Assets Administration for disposal by 7 May 1946. The War Assets Administration sold the land on 28 June 1948, and it was subsequently subdivided into private residences.

The Navy outfitted all the aircraft at Chatham NAS with Lewis machine guns. The flying boats had Davis non-recoil six pounder guns. The installation also had at least one three pounder S.A. Mark IV gun.

The Navy supplied the station with Clark Mark IV bombs, which contained 120 pounds of T.N.T. Frequently during test drops offshore, these bombs did not detonate. Between 9 June and 17 July 1918, Chatham flyers dropped thirteen bombs, all of which did not explode. On another occasion, station personnel tried to explode two bombs on the beach by direct drive to the detonating device without success. The Clark Mark IV's performance proved particularly disturbing on 21 July 1918, when pilots from Chatham participated in the Battle of Orleans (Chatham). The conflict took place three miles offshore from Orleans, Massachusetts. A German submarine, U-156, attacked and sank a tugboat and 4 barges. Although aviators successfully dropped bombs at or near the submarine, they failed to explode and the submarine escaped. Placating these failures was the bomb which didn't explode at the station when scraped off of a seaplane's wing during landing. The day after the battle, "...a load of a new type of bombs" (undetermined type) "was hurried to Chatham which, as an immediate test proved, would explode".

Chatham NAS had one magazine, Building 17. It measured 12 by 32 feet and had 10 inch reinforced concrete walls. It remained standing through at least 1944, though a site survey at the time did not reveal the presence of any ordnance left behind in the magazine from previous usage.

The base also had a quantity of small arms on hand during World War I, though available

documentation does not reveal any information on small arms training or ranges on Chatham NAS. The following guns were at the station on 4 May 1921:

4	Mark VI Lewis aircraft machine guns, Model 1917
8	Mark VI-I Lewis aircraft machine guns, Model 1917
1	3 pounder S.A. Mark IV gun, Model 1903
1	Marlin Mark VIII aircraft machine gun
100	Springfield rifles, Model 1903
12	12 Gauge Repeating Shot Guns
49	.45 caliber Colt automatic revolvers
13	pistols, Very's (U.S. Navy, Bureau of Ordnance 1921)

The archive search uncovered no documentation relating to CWM at Chatham NAS. The archive search team found no indication that Chatham NAS conducted CWM training, storage, or disposal.

2.3 REAL ESTATE

The former Chatham Naval Air Station consisted of a total of approximately 55.52 acres. This real estate figure does not concur with the 40.2 acre number stated in the INPR (Appendix D-1). It is based on the map analysis (see section 4.4.2). The discrepancy appears to result from release of property prior to the condemnation proceedings in 1921.

Based on the map analysis, the Navy Department originally acquired 47.84 acres of property in 1917. The Navy added parcels of about 0.45, 0.87 and 2.86 acres, as well as filling in another approximately 3.5 acres by the end of 1919. Prior to February 1921, it appears that the Navy released 15.32 acres of property. The archive search did not discover collateral real estate documents to support the findings of the map analysis.

The Navy declared the Chatham NAS surplus and transferred it to the War Assets Administration for disposal by 7 May 1946. The War Assets Administration sold the land on 28 June 1948 and it was subsequently subdivided into private residences (U.S. War Assets Administration 1946, 1948).

The archive search did not identify any additional areas of potential or undocumented military ownership or land use associated with Chatham NAS.

This investigation did not reveal any significant past ownership of Chatham NAS with relationship to OE or CWM.

Records reviewed indicate the current property owners include the following numerous private residences.

2.4 SITE INSPECTION

George Sloan, III and Randal S. Curtis, of the St. Louis District Corps of Engineers, performed a site inspection of the former Chatham Naval Air Station on 26 August 1997. Appendix I of the Findings Volume of this ASR includes present site photographs, and section L-2 includes the trip report memorandum from the site inspection. The following paragraph contains a synopsis of the site inspection.

The team arrived at the former Chatham Naval Air Station on Tuesday 26 August 1997 at 1200. The entire site has been redeveloped as exclusive, private residential homes adjacent to the coast line. The team took photographs of the homes which were built over the area of the former magazine. On the western side of the former base, adjacent to Crows Pond, the team found a concrete pad, identified as building 43, the mess hall, based on available site maps. This was the only evidence of the military's use of the land that the site inspection team discovered. They did not discover any evidence of OE or CWM hazards in the area.

2.5 CONFIRMED ORDNANCE PRESENCE

Historical documents confirmed that the Navy stored small arms, large caliber ammunition and Clark Mark IV bombs at the former Chatham Naval Air Station. The site inspection did not confirm the presence of ordnance debris from these items or magazine. Furthermore, the archive search did not uncover any direct evidence of a current OE hazard at the former Chatham Naval Air Station.

2.6 POTENTIAL ORDNANCE PRESENCE

Analysis of the information gathered during the archive search identifies the following areas as having been related to OE at the former Chatham Naval Air Station:

Area	OE Related Function	OE Potential (confirmed, hearsay, none except for past use)
magazine	small arms, large caliber ammunition and Clark Mark IV bombs	None, except for past use. Structure is no longer present.
seaplane docks	loading of ordnance onto aircraft	None, except for past use. Structure is no longer present.

2.7 UNCONTAMINATED AREAS

The information analyzed did not identify any areas within the approximately 55.52 acres of the former Chatham Naval Air Station as having a significant OE hazard potential. Therefore, the archive search did not recognize any remediation projects concerning OE at the former Chatham Naval Air Station.

The information gathered during the archive search indicated that Chatham Naval Air Station did not store, use, or dispose of chemical warfare materials.

2.8 SITE INFORMATION ANALYSIS

The archive search uncovered evidence that the Navy stored conventional ordnance at Chatham Naval Air Station. The types of ordnance and explosives associated with the site included: small arms, large caliber ammunition and Clark Mark IV bombs in support of the site's mission of protecting shipping in the area. The Navy used these ordnance items in the waters in and around Cape Cod. None of the reviewed information indicated any other ordnance related operations at Chatham NAS.

The ASR team did not find an overt indication of a current ordnance and explosive hazard from the Navy's use of Chatham NAS. Research discovered no historical records indicating ordnance disposal on site. Aerial photography analysis did not locate any distinct signs of on-site burial. Additionally, the site inspection did not uncover evidence of ordnance or explosives hazards.

Based on this investigation, no evidence surfaced of chemical warfare materials storage, usage, or disposal at Chatham NAS. Furthermore, the mission of Chatham NAS does not imply the presence of CWM. Research discovered no historical records associating CWM with the site. Additionally, the site inspection did not uncover any evidence of CWM hazards.

3.0 RECOMMENDATIONS

3.1 SUMMARY OF RECOMMENDATIONS

Appendix A contains the Risk Assessment Procedures for Ordnance and Explosives Sites form. Using the information available, this form resulted in a score of **RAC 5** for Chatham Naval Air Station. **RAC 5** indicates no further consideration by CEHNC for OE or CWM. The archive search team recommends that any further investigations into ordnance and explosives or chemical warfare materials at Chatham Naval Air Station terminate at this time.

3.2 OTHER ENVIRONMENTAL ACTIONS

The archive search did not reveal any additional areas of potential environmental concern associated with the military use of Chatham NAS.

3.3 PRELIMINARY ASSESSMENT ACTIONS

The archive search identified no additional preliminary assessment actions required as a result of investigating Chatham Naval Air Station.

APPENDIX A

RISK ASSESSMENT CODE PROCEDURE FORM

17 March 1995
Previous editions are obsolete

RISK ASSESSMENT PROCEDURE FOR
ORDNANCE AND EXPLOSIVES WASTE (OEW) SITES

Site Name *Chatham Naval Air Station*

Rater's Name *Randal Curtis / George Sloan, III*

Site Location *Barnstable County, MA*

Phone No. *(314) 331-8786 / (314) 331-8796*

DERP Project# *D01MA045901*

Organization *CEMVS-ED-P*

Date Completed *5 September 1997*

RAC Score *5*

OEW RISK ASSESSMENT:

This risk assessment procedure was developed in accordance with MIL-STD 882C and AR 385-10. The RAC score will be used by CEHND to prioritized the remedial action at Formerly Used Defense Sites. The risk assessment should be based upon best available information resulting from records searches, reports of Explosive Ordnance Disposal (EOD) detachment actions, and field observations, interviews, and measurements. This information is used to assess the risk involved based upon the potential EXO hazards identified at the site. The risk assessment is composed of two factors, **hazard severity and hazard probability.** Personnel involved in visits to potential OEW sites should view the CEHND videotape entitled "A Life Threatening Encounter: OEW."

Part I. Hazard Severity. Hazard severity categories are defined to provide a qualitative measure of the worst credible mishap resulting from personnel exposure to various types and quantities of unexploded ordnance items.

TYPE OF ORDNANCE
(Circle all values that apply)

A. Conventional Ordnance and Ammunition

	VALUE
Medium/Large Caliber (20 mm and larger)	10
Bombs, Explosive	10
Grenades, Hand and Rifle, Explosive	10
Landmines, Explosive	10
Rockets, Guided Missiles, Explosive	10
Detonators, Blasting Caps, Fuzes, Boosters, Bursters	6
Bombs, Practice (w/spotting charges)	6
Grenades, Practice (w/spotting charges)	4
Landmines, Practice (w/spotting charges)	4
Small Arms, Complete Round (.22 cal - .50 cal)	1
Small Arms, Expended	0
Conventional Ordnance and Ammunition (Select the largest single value)	*0*

What evidence do you have regarding conventional UXO? *Historical documents indicate that the Navy stored small arms, large caliber ammunition and demolition bombs on site. The archive search did not locate any evidence to indicate any of these items might remain.*

B. Pyrotechnics (For munitions not described above)

	VALUE
Munitions (Container) containing White Phosphorus or other Pyrophoric Material (i.e., Spontaneously Flammable)	10
Munitions Containing A Flame or Incendiary Material (i.e., Napalm, Triethylaluminum Metal Incendiaries)	6
Flares, Signals, Simulators, Screening Smokes (other than WP)	4
Pyrotechnics (Select the largest single value)	*0*

What evidence do you have regarding pyrotechnics? *None. Evidence shows this site did not use or store these materials.*

C. Bulk High Explosives (Not an integral part of conventional ordnance; uncontainerized.)

	VALUE
Primary or Initiating Explosives (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, Tetracene, etc.)	10
Demolition Charges	10
Secondary Explosives (PETN, Compositions A, B, C Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc.)	8
Military Dynamite	6
Less Sensitive Explosives (Ammonium Nitrate, Explosive D, etc.)	3
High Explosives (Select the largest single value)	0

What evidence do you have regarding bulk explosives? *None. Evidence shows this site did not use or store these materials.*

D. Bulk Propellants (Not an integral part of rockets, guided missiles, or other conventional ordnance; uncontainerized)

	VALUE
Solid of Liquid Propellants	6
Propellants	*0*

What evidence do you have regarding bulk propellants? *None. Evidence shows this site did not use or store these materials.*

E. Chemical Warfare Material and Radiological Weapons

	VALUE
Toxic Chemical Agents (Choking, Nerve, Blood, Blister)	25
War Gas Identification sets	20
Radiological	15
Riot Control and Miscellaneous (Vomiting, Tear)	5
Chemical and Radiological (Select the largest single value)	*0*

What evidence do you have regarding chemical/radiological OEW? *None. Evidence shows this site did not use or store these materials.*

Total Hazard Severity Value
(Sum of the Largest Values for A through E--Maximum of 61) *0*
Apply this value to Table 1 to determine Hazard Severity Category.

TABLE 1

HAZARD SEVERITY*

Description	Category	Hazard Severity Value
CATASTROPHIC	I	21 and greater
CRITICAL	I	10 to 20
MARGINAL	III	5 to 9
NEGLIGIBLE	IV	1 to 4
**NONE		0

**If Hazard Severity Value is 0, you do not need to complete Part II. Proceed to Part III and use a RAC Score of 5 to determine your appropriate action.

Part II. Hazard Probability. **The probability that a hazard has been or will be created due to the presence and other rated factors of unexploded ordnance or explosive materials on a formerly used DOD site.**

AREA, EXTENT, ACCESSIBILITY OF OEW HAZARD
(Circle all values that apply)

A. Location of OEW Hazards

	VALUE
On the surface	5
Within Tanks, Pipes, Vessels or Other confined locations	4
Inside walls, ceilings, or other parts of Buildings and Structures	3
Subsurface	2
Location (Select the single largest value)	_

What evidence do you have regarding location of OEW?

B. Distance to nearest inhabited locations or structures likely to be at risk from OEW hazard (roads, playgrounds, and buildings).

	VALUE
Less than 1250 feet	5
1250 feet to 0.5 miles	4
0.5 miles to 1.0 miles	3
1.0 miles to 2.0 miles	2
Over 2 miles	1
Distance (Select the single largest value)	_

What are the nearest inhabited structures?

C. Numbers of buildings within a 2 mile radius measured from the OEW hazard area, not the installation boundary.

	VALUE
26 and over	5
16 to 25	4
11 to 15	3
6 to 10	2
1 to 5	1
0	0
Number of Buildings (Select the single largest value)	_____

Narrative

D. Types of Buildings (within a 2 mile radius)

	VALUE
Educational, Child Care, Residential, Hospitals, Hotels, Commercial, Shopping Centers	5
Industrial, Warehouse, etc.	4
Agricultural, Forestry, etc.	3
Detention, Correctional	2
No Buildings	0
Types of Buildings (Select the largest single value)	_____

Describe types of buildings in the area.

E. Accessibility to site refers to access by humans to ordnance and explosives. Use the following guidance:

BARRIER	VALUE
No barrier or security system	5
Barrier is incomplete (e.g. in disrepair or does not completely surround the site). Barrier is intended to deny egress from the site, as for a barbed wire fence for grazing.	4
A barrier, (any kind of fence in good repair) but no separate means to control entry. Barrier is intended to deny access to the site.	3
Security guard, but no barrier	2
Isolated site	1
A 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the facility; or An artificial or natural barrier (e.g., a fence combined with a cliff), which completely surrounds the facility; and a means to control entry, at all times, through the gates, or other entrances to the facility (e.g., an attendant, television monitors, locked entrances, or controlled roadway access to the facility).	0
Accessibility (Select the single largest value)	_____

Describe the site accessibility.

F. Site Dynamics - This deals with site conditions that are subject to change in the future, but may be stable at the present. Examples would be excessive soil erosion by beaches or streams, increasing land development that could reduce distances from the site to inhabited areas or otherwise increase accessibility.

	VALUE
Expected	5
None Anticipated	0
Site Dynamics (Select largest value)	_____

Describe the site dynamics.

Total Hazard Probability Value
(Sum of Largest Values for A through F--Maximum of 30) _____
Apply this value to Hazard Probability Table 2 to determine Hazard Probability Level.

TABLE 2

HAZARD PROBABILITY

Description	Level	Hazard Probability Value
FREQUENT	A	27 or greater
PROBABLE	B	21 to 26
OCCASIONAL	C	15 to 20
REMOTE	D	8 to 14
IMPROBABLE	E	less than 8

*** Apply Hazard Probability Level to Table 3.**

Part III. Risk Assessment. The risk assessment value for this site is determined using the following Table 3. Enter with the results of the hazard probability and hazard severity values.

TABLE 3

Probability Level	FREQUENT A	PROBABLE B	OCCASIONAL C	REMOTE D	IMPROBABLE E
Severity Category:					
CATASTROPHIC I	1	1	2	3	4
CRITICAL II	1	2	3	4	5
MARGINAL III	2	3	4	4	5
NEGLIGIBLE IV	3	4	4	5	5

RISK ASSESSMENT CODE (RAC)

RAC 1	Expedite INPR, recommending further action by CEHND - Immediately call CEHND-OE-ES - Commercial 205-895-1582.
RAC 2	High priority on completion of INPR - Recommend further action by CEHND.
RAC 3	Complete INPR - Recommend further action by CEHND.
RAC 4	Complete INPR - Recommend further action by CEHND.
RAC 5	Usually indicates that no further action (NOFA)is necessary. Submit NOFA and RAC to CEHND.

Part IV. Narrative. Summarize the documented evidence that supports this risk assessment. If no documented evidence was available, explain all the assumptions that you made.

The RAC score assigned to Chatham Naval Air Station is 5.

Part I received a Hazard Severity Rating of "None", resulting in a Risk Assessment Code of 5 without completing Part II, Hazard Probability Rating

The ASR uncovered no evidence indicating any other type of conventional ordnance or chemical warfare materials stored or used at Chatham Naval Air Station.

APPENDIX B

ABBREVIATIONS, ACRONYMS AND BREVITY CODES

ABBREVIATIONS, ACRONYMS AND BREVITY CODES

AAF*	Army Air Field
AA	Anti-Aircraft
AEC	Army Environmental Center
AFB	Air Force Base
AMC	Army Materiel Command
AP	Armor Piercing
APDS	Armor Piercing Discarding Sabot
APERS	Anti-personnel
AP-T	Armor Piercing-Tracer
ASR	Archive Search Report
aux	auxiliary
BD	Base Detonating
BD/DR	Building Demolition/Debris Removal
BLM	Bureau of Land Management
BRAC	Base Realignment and Closure
CADD	Computer-Aided Drafting and Design
cal	Caliber
CBDA	Chemical and Biological Defense Agency
CBDCOM	Chemical and Biological Defense Command
CE	Corps of Engineers
CEHNC	Corps of Engineers, Huntsville Engineering and Support Center
CEMVS	Corps of Engineers, Mississippi Valley-St. Louis District
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CERFA	Community Environmental Response Facilitation Act
CFR	Code of Federal Regulations
COE	Chief of Engineers
ctg	Cartridge
CWM	Chemical Warfare Material
CWS*	Chemical Warfare Service
DA	Department of the Army
DARCOM	Development and Readiness Command
DERA	Defense Environmental Restoration Account
DERP	Defense Environmental Restoration Program
DoD	Department of Defense
DOE	Department of Energy
DOI	Department of Interior
EE/CA	Engineering Evaluation/Cost Analysis
EIS	Environmental Impact Statement
EOD	Explosive Ordnance Disposal
EPA	Environmental Protection Agency
ERDA	Environmental Restoration Defense Account
FDE	Findings and Determination of Eligibility

FS	Feasibility Study
FUDS	Formerly Used Defense Sites
GIS	Geographic Information System
GPS	Global Positioning Satellite
GSA	General Services Administration
HE	High Explosive
HEAT	High Explosive Anti-Tank
HEI	High Explosive Incendiary
HEP	High Explosive Plastic
HTRW	Hazardous Toxic and Radioactive Waste
HTW	Hazardous and Toxic Waste
IAS	Initial Assessment Study
INPR	Inventory Project Report
IRP	Installation Restoration Program
MCX	Mandatory Center of Expertise
MT	Mechanical Time
MTSQ	Mechanical Time Super Quick
NARA	National Archives and Records Administration
NAS*	Naval Air Station
NCP	National Contingency Plan
NEW	Net Explosive Weight
NG	National Guard
NPL	National Priorities List
NOAA	National Oceanic and Atmospheric Administration
NOFA	No Further Action
NPRC	National Personnel Records Center
NRC	National Records Center
NWS	National Weather Service
OE	Ordnance and Explosives
OSHA	Occupational Safety and Health Administration
PA	Preliminary Assessment
PD	Point Detonating
PIBD	Point Initiating, Base Detonating
PL	Public Law
QASAS	Quality Assurance Specialist Ammunition Surveillance
RA	Removal Action
RAC	Risk Assessment Code
RD	Remedial Design
RG	Record Group
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
SARA	Superfund Amendments and Reauthorization Act
SSHO	Site Safety and Health Officer
SSHP	Site Safety and Health Plan
SWMU	Solid Waste Management Units

TECOM	Test Evaluation Command
TEU	United States Army Technical Escort Unit
TNT	Trinitrotoluene
TP	Target Practice
U.S.	United States (of America)
USA	United States Army
USACE	U.S. Army Corps of Engineers
USADACS	U.S. Army Defense Ammunition Center and School
USAESCH	U.S. Army Engineering and Support Center, Huntsville, AL
USAFHRA	U.S. Air Force Historical Research Agency
USATHMA	U.S. Army Toxic and Hazardous Materials Agency
USC	United States Code
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey
UXO	Unexploded Ordnance
WAA*	War Assets Administration
WD*	War Department
WNRC	Washington National Records Center

* designates a historic acronym

APPENDIX C

REPORT DISTRIBUTION LIST

REPORT DISTRIBUTION LIST

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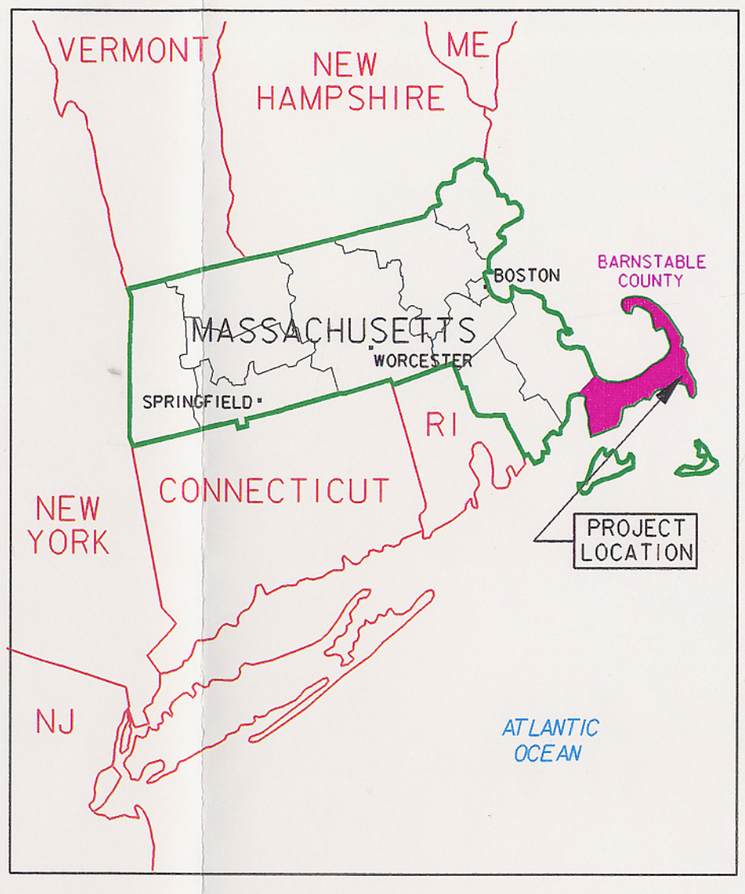
PLATES



LEGEND

SITE LOCATION

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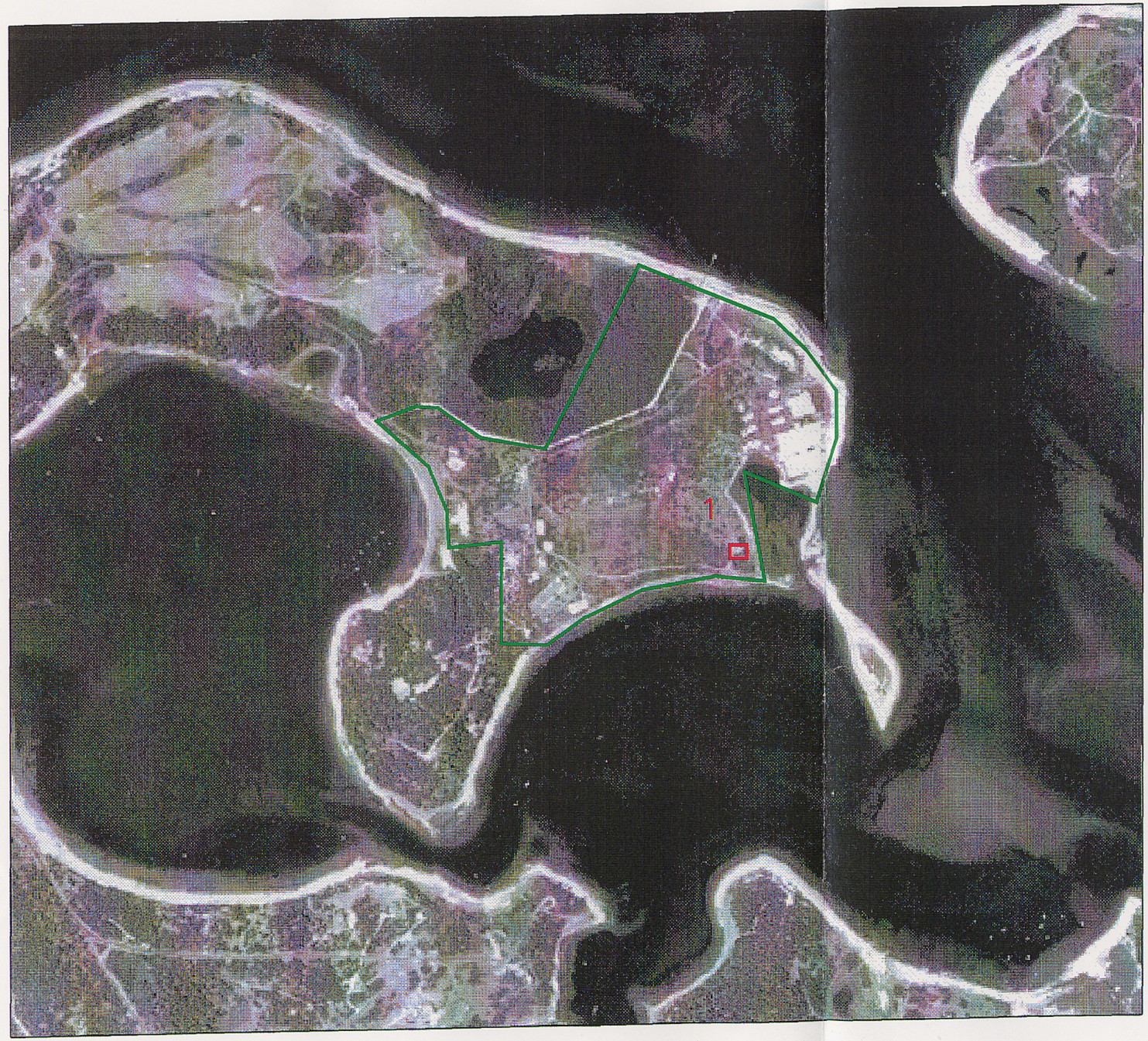
PLATE I

CHATHAM NAVAL AIR STATION
CHATHAM, MASSACHUSETTS
BARNSTABLE COUNTY
DERP-FUDS #D01MA045901
VICINITY MAP

PROJ. DATE: JUNE 1997	DATE OF MAP: 1995
17-SEP-1997 08:51	N/OEW9TB/MASSMAIN/CHATHAM/PHOTO/CHTHMVIC.DGN & EXT



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FEATURE LOCATION

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PLATE 2

CHATHAM NAVAL AIR STATION
CHATHAM, MASSACHUSETTS
BARNSTABLE COUNTY
DERP-FUDS #D01MA045901
1952 AERIAL PHOTOGRAPHY

PROJ. DATE: JUNE 1997	DATE OF PHOTO: 1952
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